

## A New *Pterostichus* (Coleoptera, Carabidae) from the Suzuka Mountains, Central Japan

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**Abstract** A new pterostichine carabid beetle, *Pterostichus akitai* is described from the Suzuka Mountains, Central Japan. It is related to *P. uedaorum* MORITA et HIRASAWA, but differs from it mainly in the shape of the male genitalia.

Recently, a macrocephalic pterostichine carabid beetle was obtained by Mr. Katsumi AKITA on Mt. Oike-dake of the Suzuka Mountains, Central Japan, and was submitted to me for identification. This paper is intended to show the result of my study concerning this pterostichine species.

*Abbreviations.* The abbreviations used herein are as follows: HW – greatest width of head; NW – width of neck, measured just behind genae; PW – greatest width of pronotum; PL – length of pronotum, measured along the mid-line; PA – width of pronotal apex; PB – width of pronotal base; EW – greatest width of elytra; EL – greatest length of elytra; EB – width of elytral base; FL – length of metafemur; ML – length of metatrochanter; TL – length of hind tarsus; M – arithmetic mean; NSMT – National Science Museum (Nat. Hist.), Tokyo; H – Holotype.

*Acknowledgements.* I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO for critically reading the manuscript of this paper. My thanks are also due to Mr. Katsumi AKITA for supplying me with important material.

### *Pterostichus akitai* MORITA, sp. nov.

[Japanese name : Suzuka-ōzu-naga-gomimushi]

(Figs. 1–10)

*Description.* Length: 14.25–15.43 mm (from apical margin of clypeus to apices of elytra). Body elongate and flat. Colour dark brown.

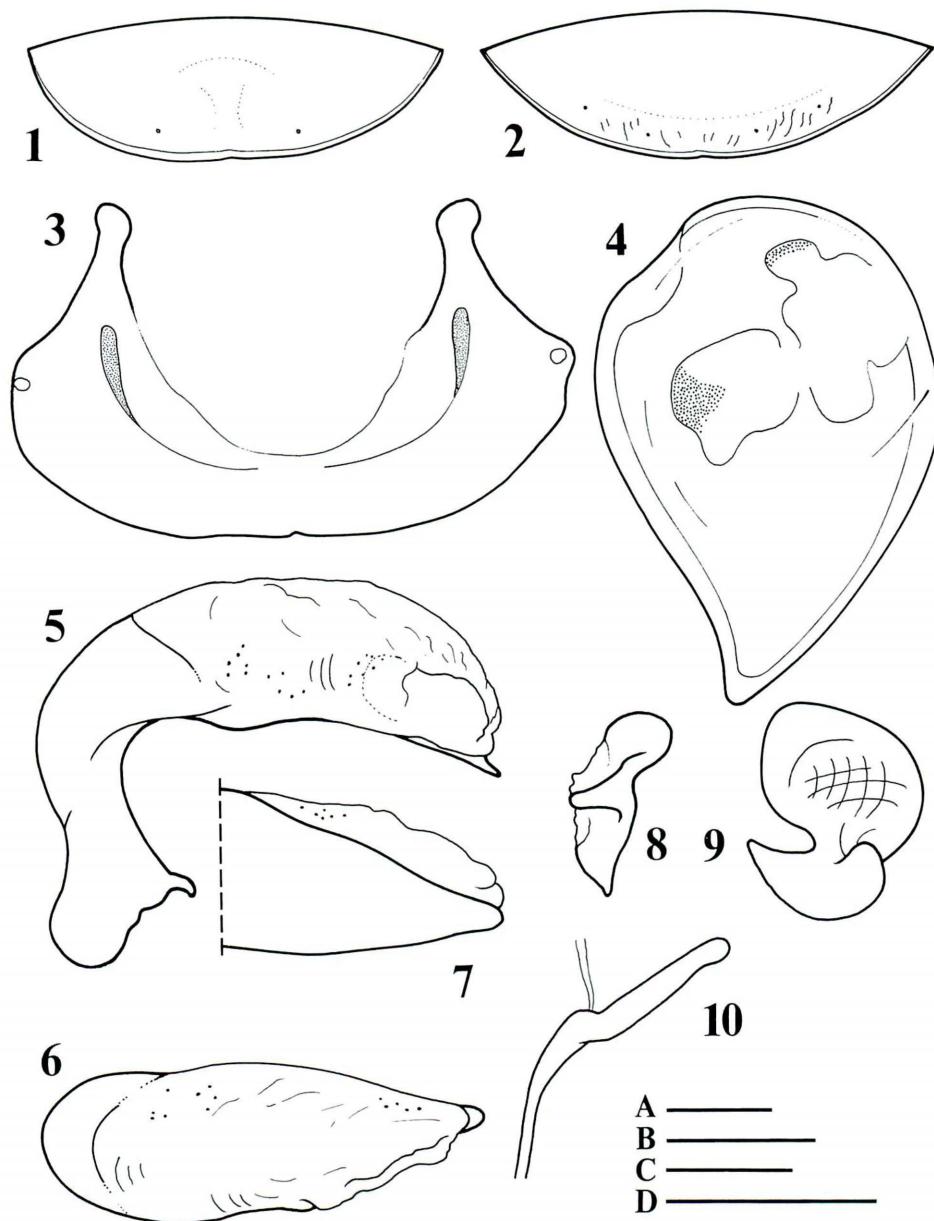
Head very large and a little narrower than pronotum; PW/HW 1.07 in H, 1.04 in 1♂, 1.04, 1.04 in 2♀♀; frontal furrows deep, short and almost parallel; eyes entirely flat and small; lateral grooves arcuate, a little wide, deeper than frontal furrows, reaching the posterior supraorbital pores on each side, and with an additional furrow which is situated on each side between post-eye level and the level of posterior supraorbital pore; anterior supraorbital pores situated at the post-eye level or a little behind that

level; genae very large and strongly convex; neck wide; HW/NW 1.33 in H, 1.28 in 1♂, 1.29, 1.33 in 2♀♀; vertex slightly depressed; microsculpture composed of wide meshes on frons and vertex, and of transverse ones on genae; surface microscopically and sparsely punctate; mentum with an oblique groove and a small pit on each side; mentum tooth bifid, wide, a little produced, and with a transverse sulcus at the basal part; submentum strongly convex, and with two pair of setae; apical margin of clypeus moderately emarginate; labrum strongly emarginate and rounded at the corners; terminal segment of maxillary palpi widest at about middle and truncate at the apex; terminal segment of labial palpi widest at basal 2/5 and truncate at the apex; antennal segment I with a long seta, segment II with a short seta; relative lengths of antennal segments as follows: — I : II : III : IV : V : VI : XI = 1 : 0.51 : 0.87 : 0.82 : 0.80 : 0.78 : 0.71 in H, = 1 : 0.50 : 0.80 : 0.77 : 0.77 : 0.74 : 0.73 in 1♀.

Pronotum flat, nearly square, widest at about basal 5/6 (measured along the mid line) in H, 1/10 in 1♂, 3/4 in 1♀; PW/PL 1.51 in H, 1.52 in 1♂, 1.61, 1.54 in 2♀♀; apex widely and strongly emarginate, a little wider than base; PA/PB 1.13 in H, 1.18 in 1♂, 1.22, 1.21 in 2♀♀; PW/PA 1.16 in H, 1.11 in 1♂, 1.11, 1.09 in 2♀♀; PW/PB 1.31 in H, 1.32 in 1♂, 1.35, 1.32 in 2♀♀; apical angles strongly produced and obtusely pointed at the tips; sides weakly and widely arcuate in front, shallowly sinuate behind, and then weakly divergent just before sharp hind angles; base emarginate and oblique at the sides; median line finely impressed, reaching the level just before the basal margin and not reaching apex; anterior transverse impression evanescent, posterior one vague; basal foveae rather shallow, small, linear at the bottom, and with very sparse and rather coarse punctures at the outside and with short longitudinal wrinkles at the bottom and inside on each side; in H, small foveole present between median line and sides, and situated at basal 2/3 (measured along the mid line) on each side; microsculpture composed of wide to transverse meshes.

Elytra flat and elongate; shoulders widely rounded; EW/PW 1.22 in H, 1.21 in 1♂, 1.11, 1.16 in 2♀♀; EL/EW 1.62 in H, 1.70 in 1♂, 1.65, 1.65 in 2♀♀; sides a little divergent from behind shoulders to the widest part, widely arcuate in apical parts, and with shallow preapical emargination; epipleuron very narrow and gradually narrowed towards apex; inner plica distinct; apices separated from each other, and forming a re-entrant angle at suture; EB/EW 0.66 in H, 0.68 in 1♂, 0.69, 0.66 in 2♀♀; basal border slightly arcuate and joining scutellar striole; basal part strongly depressed; intervals very weakly convex, and sparsely and microscopically punctate; interval III with two or three setiferous dorsal pores; striae finely impressed and sparsely crenulate; striae 6 and 7 not joining basal border; scutellar striole very short, and situated on interval I; basal pore situated at the meeting point of striae 1 and 2; marginal series composed of 13 or 14 pores; microsculpture composed of isodiametric meshes.

Gula with transverse wrinkles at the sides; metepisternum with several coarse punctures; in ♂, anal sternite (VII) smooth, weakly depressed, notched at apex and narrowly bordered throughout; in ♀, anal sternite (VII) weakly depressed between a pair of outer setae, narrowly bordered throughout, weakly emarginate at apex or notched,



Figs. 1–10. *Pterostichus akitai* MORITA, sp. nov. —— 1, Anal sternite in ♂; 2, anal sternite in ♀; 3, tergum VIII in ♀; 4, genital segment, ventral view; 5, aedeagus, left lateral view; 6, aedeagus, left dorso-lateral view; 7, apical part of aedeagus, ventral view; 8, right paramere, left lateral view; 9, left paramere, left lateral view; 10, spermatheca. Scale 1 mm: A for 1, 2; B for 3, 5–9; C for 4; D for 10.

and with many short wrinkles along the margin between a pair of outer setae; in ♀, tergum VIII notched at middle of posterior margin.

Legs slender; tarsi smooth on dorsal side; TL/HW 0.97 in H, 0.99 in 1♂, 0.91, 0.90 in 2♀♀; metafemora with two setae on each side; metatrochanter short and with rounded apex; ML/FL 0.40 in H, 0.40, 0.35 in 2♀♀.

Genital segment oval with narrow handle. Aedeagus small and strongly bent at basal third; viewed dorsally, apical 2/3 of aedeagus curved towards the right; dorsal membranous part wide; ventral side with a small tumor at about middle; apical lobe narrow, short, and with simply rounded apex in dorsal view; apical orifice situated at the left dorso-lateral side; a narrow and smooth membranous part situated near the proximal part of apical orifice; left paramere wide; right paramere short, almost straight and with rounded apex. Spermatheca thick, elongate and with rounded apex; spermathecal duct thin though becoming thicker towards spermatheca.

*Variation of posterior supraorbital seta.* In 1♀, an additional seta exists just behind the ordinary one on the right side.

*Variation of submentum.* In 1♂, an additional seta is present outside of left outer seta. In 2♀♀, an additional seta is present between inner and outer ordinary setae on one side.

*Variation of elytra chaetotaxy.* In H, a pair of the first pores are lacking. A pair of the second pores join the stria 2 and are situated at basal 4/9. The third pore on the right elytron joins stria 2 and is situated at basal 9/10 of elytra. Apical part of the left elytron is damaged.

In 1♂, three pores are present on the right side: the first pore joins stria 3 and the remaining two join stria 2; they are situated at about 7/25, 1/2 and 4/5, respectively. The first pore on the left elytron is lacking. The second and the third ones are situated at the ordinary position.

In 1♀, three pores are present on each side: the first pore joins stria 3 and the remaining two join stria 2; they are situated at about 1/4, 4/9 and 9/10, respectively.

Similar position is found in the other female, but the first pore on the right elytron is lacking.

*Type series.* Holotype: ♂, 8~22-VI-2003, K. AKITA leg. (NSMT). Paratypes: 1♀, 15~23-IX-2002, K. AKITA leg.; 1♀, 9-XI-2002, K. AKITA leg.; 1♂, 18-X~8-XI-2003, K. AKITA leg.

*Type locality.* Mt. Oike-dake, 600~900 m alt., Fujiwara-chō, Mie Prefecture, Central Japan.

*Notes.* This new species is closely allied to *Pterostichus uedaorum* MORITA et HIRASAWA (1996, p.27). It is, however, distinguished from the latter by the following points: 1) pronotum more sparsely punctate; 2) elytral sides less arcuate from behind shoulders to the widest part; 3) aedeagus more robust; 4) ventral side of aedeagus with a tumor; 5) apical lobe of aedeagus shorter; and 6) apex of right paramere narrower.

This species is named in honor of Mr. Katsumi AKITA, who is the discoverer of the pterostichine.

## 要 約

森田誠司：鈴鹿山脈のオオズナガゴミムシの1新種。—— 鈴鹿山脈から発見されたオオズナガゴミムシの1新種 *Pterostichus akitai* MORITA を記載した。この新種は、石川県の医王山などから記載された *P. uedaorum* MORITA et HIRASAWA, 1996 に類縁が近い。

## Reference

- MORITA, S., & H. HIRASAWA, 1996. Macrocephalic pterostichines (Coleoptera, Carabidae) from central Honshu, Japan. *Elytra, Tokyo*, **24**: 21–30.
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*Elytra, Tokyo*, **32** (1): 33–34, May 31, 2004

### *Tricholicinus setosus* (Coleoptera, Carabidae) Found in Japan

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Recently, I had an opportunity to examine a pair of small licinine carabid beetles collected from Hokkaido, North Japan through the courtesy of Mr. KATO. I soon found that his specimens are the species known from the Russian Far East as *Tricholicinus setosus*, since I have specimens of the same species from the Primorye in my collection, which were determined by Dr. LAFER and Dr. SUNDUKOV.

In this paper, I will add this species to the carabid fauna of Japan.

I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for critically reading the original manuscript of this paper. My thanks are also due to Dr. German Sh. LAFER and Dr. Yurij N. SUNDUKOV for their kind help, and to Mr. Toshiyuki KATO for supplying me with important material.

### *Tricholicinus setosus* (SAHLBERG)

[Ko-marukiba-gomimushi]

(Figs. 1–2)

*Derostichus setosus* SAHLBERG, 1880, K. Vet. Akad. Handl., Stockholm, **17**: 40.

*Tricholicinus setosus*: POPPIUS, 1912, Russk. ent. Obozr., Moskva, **12** (1): 109–110. —— BALL, 1959,